

NOTES AND ILLUSTRATIONS OF QUEENSLAND FISHES.

By ALLAN R. McCULLOCH, Zoologist, Australian Museum.

(Plates XVI–XVIII.)

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FAMILY PSEUDOCHROMIDIDÆ.

GENUS PSEUDOCHROMIS, Rüppell.

Pseudochromis, Rüppell, Neue Wirbelth. Fische, 1835, p. 8 (*P. olivaceus*, Rüppell).
Assiculus, Richardson, in Stokes, Discov. in Austr., i., 1846, p. 492 (*A. punctatus*, Richardson).
Onar, de Vis, Proc. Linn. Soc. N. S. Wales, ix., 1885, p. 875 (*O. nebulosum*, de Vis).

Assiculus, Richardson, is evidently identical with *Pseudochromis*. The several characters relied upon by Richardson to distinguish his genus are all more or less developed in different species of *Pseudochromis*.

A co-type of *Onar nebulosum*, de Vis, is in the Australian Museum collection, which does not differ from Rüppell's genus.

PSEUDOCHROMIS PUNCTATUS, Richardson.

Assiculus punctatus, Richardson, in Stokes, Discov. in Austr., i., 1846, p. 494, pl. ii., fig. 1.
Pseudochromis Mülleri, Klunzinger, Sitzb. Akad. Wiss. Wien, lxxx. i., 1879, p. 370. *Id.*,
 Macleay, Proc. Linn. Soc. N. S. Wales, ix., 1884, p. 28. *Id.*, Waite, Rec. Austr. Mus., vi.,
 1905, p. 62.
Cichlops filamentosus, Macleay, Proc. Linn. Soc. N. S. Wales, v., 1881, p. 570.

Six examples, 53-89 mm. long, agree almost entirely with the description and figure of *Assiculus punctatus*, as well as with *P. mulleri* and *Cichlops filamentosus*. Being in a better state of preservation than Richardson's type specimen, they have the body thicker than his figure shows it to be, and the top of the head and nape flattened instead of sharp. Most of the dorsal rays are simple instead of divided, but the anterior portion of that fin was damaged in the type. In none of my specimens is the sub-opercular border crenulate as he described it, but they agree so well in all other details that I have no doubt they are correctly identified.

They vary in colour, after preservation in formalin, from light to dark brown, with more or less numerous, dark (blue) dots on the head and anterior half of the body. A large black blotch is present on the spinous portion of the dorsal, and the remainder of that fin, together with the anal and caudal, may be nearly plain, or closely covered with minute ocelli.

Loc.—Useless Inlet, Shark Bay, Western Australia.

PSEUDOCROMIS NOVÆ-HOLLANDIÆ, Steindachner.

(Plate XVI, Fig. 1.)

Pseudochromis novæ-hollandiæ, Steindachner, Sitzb. Akad. Wiss. Wien, lxxx. i., 1879, p. 160.
? *Polyacanthus queenslandiæ*, Kent, Gt. Barrier Reef, 1893, p. 308, pl. xvi., fig. 8.

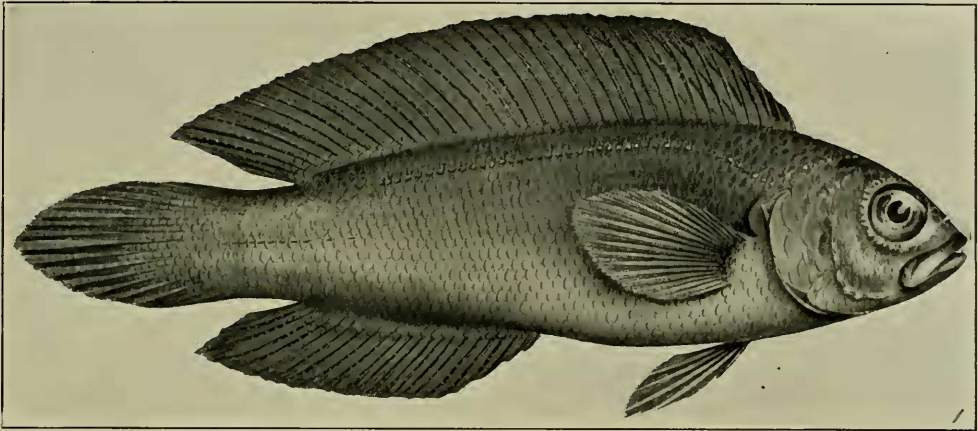
D. iii/37; A. iii/20; P. 18; V. i/5; C. 17. L. lat. 42-43+12; L. tr. 20. Head 3.5, depth before the ventrals 3.3 in the length to the hypural. Snout 1.3, interorbital space 1.8 in the eye, which is 3.3 in the head. Third dorsal spine 3.3, third last dorsal ray 1.4 in the head. Third last anal ray 1.3, pectoral 1.1, ventral 1.3 in the head.

Body compressed, broadest at the operculum. Head blunt, the upper profile convex from the snout to the anterior portion of the dorsal fin. Caudal peduncle very broad and compressed. Head with several series of mucous canals extending around the eyes, along the margins of the preorbital, preoperculum, and tip of opercular lobe. Two other series descend obliquely backwards from the side of the nape, the first to above the preoperculum and the second to the origin of the lateral line. Mandible with three pores on each side below. Nostrils almost on the upper surface of the snout, the anterior tubular, the posterior an open pore. Maxillary nearly reaching to below the middle of the eye.

Teeth cardiform, in a single series on the sides of the upper jaw; a band of villiform teeth anteriorly, with one or two strong canines on each side of the symphysis. The teeth of the lower jaw are similarly arranged, but the lateral ones increase in size towards the middle of each ramus. A large patch of villiform teeth on the vomer, and a smaller one on each palatine.

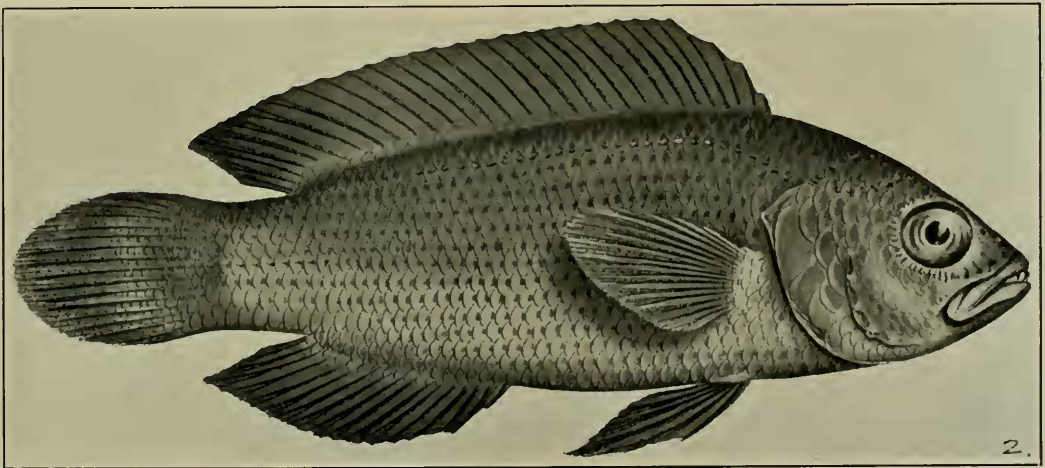
Body covered with moderately large, ctenoid scales, which extend forward to the interorbital space, and on the sides of the head. They are arranged in about six rows on the cheek, and are very large and irregular on the operculum. The bases of the dorsal and anal fins are protected by a low sheath of scales, and the basal half of the caudal is similarly covered. Lateral line rising rapidly from the operculum towards the back, with which it runs parallel to below the twenty-eighth dorsal ray; it is separated from the base of the dorsal by two scales. Six or seven rows below its termination it recommences, and extends along the middle of the caudal peduncle. There are forty-nine rows of scales between the upper end of the gill-opening and the hypural joint.

Dorsal fin originating above the operculum. The spines and anterior rays increase rapidly in height, but those of the remainder of the fin are subequal in length, increasing only slightly to the third last; the latter reaches the end of the first third of the caudal when adpressed. Anal similar to the dorsal. Pectoral rounded, the seventh ray longest, and not quite reaching the verticle of the vent. Ventrals elongate, pointed, inserted below the anterior base of the pectoral. Caudal pointed.



PSEUDOCROMIS NOVAE-HOLLANDIAE Steindachner. $\frac{2}{3}$ Nat. Size.

A. R. McCulloch, del.



PSEUDOCROMIS NEBULOSUS (de Vis). $\frac{2}{3}$ Nat. Size.

A. R. McCulloch, del.

Colour.—Head and body dark brown, the sides between the pectoral fin tinged with deep red. All the fins except the ventral very dark, almost black; a black blotch between the dorsal spines, and some narrow oblique dark lines on the anterior rays.

Described and figured from a specimen 87 mm. long.

Colour variety A.—A second specimen differs in being much lighter in colour, with distinct markings. In life, the head and anterior portion of the body was deep pink, the rest of the body being sage green. A dark blue line extends round the lower and hinder margins of the eye, and there are two similar marks on the cheeks. Pectoral and ventral pale pink. Dorsal bright green, margined with a yellow and blue line; a dark spot is present between the spines, and there are longitudinal series of spots near the base of the fin. Anal similar to the dorsal. Caudal sage green with an oblique scarlet and blue marginal band on each lobe. D. iii/35; A. iii/20. L. lat. 42+14; 50 rows of scales between the gill-opening and the hypural.

Colour variety B.—A third example is intermediate between the first and second specimens, being lighter like the last but having none of its striking colour markings. D. iii/36; A. iii/20. L. lat. 43+12; 50 rows of scales between the gill-opening and the hypural.

These three specimens differ slightly from Steindachner's brief description in their proportions and fin formula, but they vary somewhat among themselves, and I have little doubt that they are correctly identified. Their remarkable colour variation suggests that they represent more than one species, but as I found them living together in the same pool, and there being no important structural differences between them, I prefer to regard them as one.

The name *Polyacanthus queenslandiae*, Kent, was founded on a colour sketch of a fish from Adolphus Island, Torres Strait. It has the general form of a *Pseudochromis*, while its pink and grey colouration partially corresponds to my variety A.

Loc.—Masthead Island, Capricorn Group, off Port Curtis, Queensland; in a pool on the coral reef. Steindachner's type was taken at Port Denis (Port Denison, Queensland).

PSEUDOCROMIS NEBULOSUS, de Vis.

(Plate XVI, Fig. 2.)

Onar nebulosum, de Vis, Proc. Linn. Soc. N. S. Wales, ix., 1885, p. 875.

D. iii/27; A. iii/14; P. 18; V. i/5; C. 17. L. lat. dex. 32+9; sin. 27+9. Head 3, depth before the ventrals 3 in the length to the hypural. Snout 1.2,

interorbital space 1.7 in the eye, which is 3.4 in the head. Third dorsal spine 3.4, third last dorsal ray 1.9 in the head. Third last anal ray 1.9, pectoral 1.3, ventral 1.3 in the head.

Body compressed, broadest at the operculum. Head moderately pointed, the upper profile from the snout to the first dorsal spine very slightly convex. Caudal peduncle broad and compressed. Head with several series of mucous canals extending around the eyes, along the margins of the preorbital, preoperculum, and tip of opercular lobe. Two other series descend obliquely backwards from the side of the nape, the first to above the preoperculum and the second to the origin of the lateral line. Mandible with three pores on each side below. Nostrils almost on the upper surface of the snout, the anterior in a low tube, the posterior a simple opening. Maxillary not quite reaching the verticle of the middle of the eye.

Teeth cardiform and in a single series on the side of the upper jaw; a band of villiform teeth anteriorly, with two very strong curved canines on either side of the symphysis. A villiform band on the mandible anteriorly; on the sides they are cardiform and increase in size to the middle of each ramus, where they become abruptly minute. A small canine on each side of the mandibular symphysis, followed by a very large, curved one which overlaps the upper jaw. A single row of moderately strong teeth on the vomer, and a few on the end of each palatine.

Body covered with moderately large, ctenoid scales, which extend forward to the interorbital space and sides of the head. They are arranged in five or six rows on the cheek, and are very large and irregular on the operculum. Bases of dorsal and anal fins protected by a low sheath of scales, and the basal half of the caudal is similarly covered. Lateral line rising rapidly from the operculum towards the back, with which it is parallel to below the fifteenth dorsal ray; it is separated from the base of the dorsal by two scales. Six rows below its interruption, it recommences, and extends along the middle of the caudal peduncle. There are thirty-nine rows between the upper end of the gill-opening and the hypural.

Dorsal fin originating over the end of the operculum. The spines and anterior rays increase rapidly in height, but those of the remainder of the fin are subequal in length, increasing only slightly to the third last; the latter reaches the end of the first fourth of the caudal when adpressed. Pectoral rounded, the seventh ray longest, not quite reaching the verticle of the vent. Ventrals elongate, pointed, inserted below the anterior base of the pectoral. Caudal moderately pointed, the tip rounded.

Colour.—Uniform brown after long preservation, the dorsal, anal, and ventrals darker. Each scale of the body has a dark basal spot.

Described and figured from a specimen, 62 mm. long, in the collection of the Australian Museum. It was received in exchange from the Queensland Museum as a co-type of *Onar nebulosum*, de Vis, and I have no doubt that it is one of the original specimens. But it proves the description of the species to be very inaccurate, the dorsal formula being iii/27 instead of ii/17, while the height is 3.8 instead of $4\frac{1}{3}$ in the total length. Four other specimens, 45-78 mm. long, are in the old collection of the Australian Museum, one of which is from Duke of York Island, and the others are without data. The larger ones differ from the co-type in having some of the ventral rays filamentous and reaching the origin of the anal. The number of enlarged canines in the anterior part of each jaw varies from one to three pairs. D. iii/25-27; A. iii/14-15.

Loc.—Murray Island, Torres Strait. Duke of York Island, New Britain.

FAMILY PLESIOPIDÆ.

GENUS BELONEPTERYGION, gen. nov.

Body moderately elongate, compressed, covered with large ctenoid scales. Three lateral lines, the first near the back, the second along the middle of the side, and the third above the base of the anal fin. Dorsal about xviii/6, anal about x/5; ventral i/2. Head naked, with rows of muciferous canals and pores surrounding the eye, and extending along the margin of the preorbital and preoperculum; others cross the nape, and there are some pores on the under surface of the mandible. Bands of minute teeth on the jaws, and two groups on the vomer; palatines and tongue toothless.

Type.—*Acanthoclinus fasciolatus*, Ogilby.

This genus is very similar to *Acanthoclinus*, Jenyns,¹ but differs in having no palatine teeth, and the scales are large and ctenoid instead of minute and cycloid. It is apparently also related to *Acanthoplesiops*,² but that genus has only one lateral line.

BELONEPTERYGION FASCIOLATUM, Ogilby.

Acanthoclinus littoreus vel fasciolatus, Ogilby, Mem. Austr. Mus., ii., 1889, p. 63, pl. iii., fig. 3.
Acanthoclinus litoreus, Waite, Rec. Austr. Mus., v., pt. 3, 1904, pp. 184, 225. *Id.*, McCulloch, Proc. Linn. Soc. N. S. Wales, xxxv., 1910, p. 431. *Id.*, Ogilby, Mem. Qld. Mus., ii., 1913, p. 92 (nec. Jenyns).

Having compared specimens of this species with a New Zealand example of *Acanthoclinus litoreus*, Jenyns, I find generic differences between them as noted above. There is a remarkable resemblance in the colour-marking of the two, though the body-colour of *B. fasciolatum* varies from light brown with dark cross-bars to deep black.

¹ Jenyns, Zool. "Beagle," iii., 1841, p. 91.

² Regan, Ann. Mag. Nat. Hist. (8), xii., 1913, p. 114.

This species is not uncommon in pools on the coral reefs of Lord Howe Island and Queensland.

FAMILY LUTIANIDÆ.

GENUS LUTIANUS, Bloch.

LUTIANUS SUPERBUS, Castelnau.

(Plate XVII.)

Diacopus superbus, Castelnau, Proc. Linn. Soc. N. S. Wales, ii., 1878, p. 228.

Mesoprion superbus, Macleay, Proc. Linn. Soc. N. S. Wales, v., 1881, p. 331.

D. X.13; A. III.8; P. 17; V. 1.5; C. 17. L. lat. 46 to the hypural joint.. Depth before the ventral fins, 2.9 in the length to the hypural joint; head, including the opercular flap, 2.8 in the same. Snout 3.1, eye 6.1, caudal peduncle 2.1 in the head. Pectoral 1.4, third dorsal spine 2.6 in the head.

Profile from the snout to the first dorsal spine convex, the upper line of the head almost straight. Upper portion of head naked, a few large scales extending obliquely backward on either side of the nape. Cheek scales in seven rows. Maxillary reaching back to below the anterior portion of the eye. Preopercular notch large and open, the posterior margin finely serrated, the angle rounded and denticulated. Operculum unarmed, the posterior lobe somewhat pointed.

Upper jaw with three canines on either side of the symphysis, of which the first is the smallest, and the second the longest. Behind these a row of widely spaced canines extends along each side, and there is an inner band of minute villiform teeth. Lower jaw with a similar row of larger canines, and a very small band of villiform teeth anteriorly. Vomerine teeth forming a triangular patch with a median posterior extension; the lateral angles are also produced. Microscopic teeth are present on the palatines and tongue.

Scales somewhat oblique above the lateral line, almost horizontal below it. There are seven scales between it and the middle of the spinous dorsal, and sixteen more to the median ventral line. The pore-bearing scales of the lateral line are small and intercalated between the others. The bases of the dorsal, anal, and caudal fins are scaly, the scales extending about halfway up between the rays.

Third and fourth dorsal spines longest, the last a little higher than the penultimate one; the margin of the second dorsal is rounded, the median rays being longest and but little shorter than the third spine. Anal spines strong, the third the longest; the fin is short and somewhat pointed, the third ray being longest, longer than the dorsal spines. Pectoral falcate, not reaching back to the level of the vent. Ventrals inserted well before the first dorsal spine, and a little behind the pectorals. Caudal slightly emarginate.

